

REMARKS

This amendment is in response to the Non-Final Office Action mailed November 22, 2010 (the "Office Action"). Claims 1-4, 8-13, and 17-24 are pending in the application. Claims 5 and 14 were previously canceled without prejudice or disclaimer. Claims 6, 7, 8, 15, and 16 have been canceled herein without prejudice or disclaimer. Claims 10, 17, and 18 have been amended. Claims 21-24 have been added. No new matter has been added. Support for the claim amendments and for the new claims can be found in the application as originally filed.

Applicants thank the Examiner for the courtesies extended during the telephonic interview conference between the Examiner and Applicants' Representative, held February 3, 2011, during which the cited references were discussed in view of the pending claims. No agreement as to allowable subject matter was reached.

Rejections under 35 U.S.C. § 112

The Office has rejected claims 10, 17, and 18, under 35 U.S.C. § 112, second paragraph. Applicants respectfully submit that claims 10, 17, and 18 as amended comply with 35 U.S.C. § 112, second paragraph. Hence, Applicants respectfully request withdrawal of the rejections of claim 10, 17, and 18 under 35 U.S.C. § 112, second paragraph.

Claims 1 is Allowable

The Office has rejected claims 1 and 6-7, under 35 U.S.C. § 103(a), as being unpatentable over U.S. Patent No. 6,643,520 ("Park") in view of U.S. Patent No. 6,278,781 ("Rhoads"), further in view of U.S. Patent No. 6,628,965 ("LaRosa"), and further in view of U.S. Patent No. 6,556,590 ("Saeijs"). Claims 6-7 have been canceled without prejudice or disclaimer. Applicants respectfully traverse the remaining rejection.

The cited portions of Park, Rhoads, LaRosa, and Saeijs fail to disclose or suggest the specific combination of claim 1. For example, the cited portions of Park, Rhoads, LaRosa, and Saeijs fail to disclose or suggest receiving and demodulating a preamble at a first station and determining an energy value for a transmission from the first station to a second station, where the energy value is based on the preamble, as in claim 1.

Park describes determining an initial transmission power for a forward link channel transmitter of a base station in a mobile communication system. *See* Park, Abstract. The base station transmits a pilot signal to a mobile device, the mobile device measures a signal strength of the pilot signal, and the mobile device reports the measured signal strength to the base station. *See* Park, col. 3, ll. 45-58. The Office does not assert that Park describes receiving a preamble.

At page 3 of the Office Action, the Office states that “the pilot signal of Park has been interpreted as the preamble because they have the same functionality and they serve the same purpose...” Applicants respectfully submit that the pilot signal of Park does not have the same functionality and does not serve the same purpose as a preamble, as in claim 1. For example, the cited portions of Park do not disclose or suggest that the pilot signal of Park is modulated or demodulated, as a preamble. A preamble may be used to transmit data or information, e.g. data or information not known in advance to a receiver. Further, a preamble may be communicated over a data channel or a traffic channel. In contrast, Park describes a pilot signal used for channel estimation and transmitted via a channel dedicated for pilot signal transmission, where the pilot signal is known in advance to the receiver (e.g. all zeros or all ones). *See* Park, Fig. 3 & ll. 45-58. Therefore, Applicants respectfully submit that the pilot signal of Park does not have the same functionality of a preamble and does not serve the same purpose of a preamble.

At page 3 of the Office Action, the Office states that the terms “preamble” and “pilot” have been used interchangeably in the art. For example, the Office cites to U.S. Patent No. 5,400,362 (“Chennakeshu”) as evidence that the terms “preamble” and “pilot” have been used interchangeably in the art. The cited portion of Chennakeshu does not disclose “pilot” or “pilot signal.” Therefore, Applicants respectfully submit that the cited portion of Chennakeshu does not provide evidence that the terms “preamble” and “pilot” have been used interchangeably in the art.

The Office further cites to U.S. Patent No. 6,101,400 (“Ogaz”) as evidence that the terms “preamble” and “pilot” have been used interchangeably in the art. The cited portion of Ogaz does not disclose “pilot” or “pilot signal.” Therefore, Applicants respectfully submit that the cited portion of Ogaz does not provide evidence that the terms “preamble” and “pilot” have been used interchangeably in the art.

The Office further cites to U.S. Patent Application Publication No. 2001/0053141 (“Periyalar”) as evidence that the terms “preamble” and “pilot” have been used interchangeably

in the art. The cited portion of Periyalwar describes that a preamble/header may include a pilot signal. *See* Periyalwar, paragraph 80. Applicants respectfully submit that the cited portion of Periyalwar supports Applicants' position that a preamble and a pilot need not have the same functionality and purpose, since if a pilot had the same function and purpose of a preamble then one would not include a pilot in a preamble, because the function of the pilot would already be served by the preamble and including a pilot in the preamble would therefore be unnecessary. Therefore, Applicants respectfully submit that the cited portion of Periyalwar does not provide evidence that the terms "preamble" and "pilot" have been used interchangeably in the art.

The Office further cites to U.S. Patent Application Publication No. 2002/0164963 ("Tehrani") as evidence that the terms "preamble" and "pilot" have been used interchangeably in the art. The cited portion of Tehrani does not disclose "pilot" or "pilot signal." Therefore, Applicants respectfully submit that the cited portion of Tehrani does not provide evidence that the terms "preamble" and "pilot" have been used interchangeably in the art.

The Office further cites to U.S. Patent Application Publication No. 2009/0233544 ("Oyman") as evidence that the terms "preamble" and "pilot" have been used interchangeably in the art. The cited portion of Oyman does not disclose "pilot" or "pilot signal." Therefore, Applicants respectfully submit that the cited portion of Oyman does not provide evidence that the terms "preamble" and "pilot" have been used interchangeably in the art.

Therefore, Applicants respectfully submit that that the Office has failed to show how or why the terms "pilot" and "preamble" are interchangeable. Even assuming arguendo that the Office is able to show that "pilot" and "preamble" have been used interchangeably, Applicants respectfully submit that the Office has not shown that the pilot of Park has the same functionality and purpose as the preamble of claim 1.

Moreover, Applicants respectfully submit that the Office has failed to make a prima facie case showing how or why it would have been obvious to use a pilot signal in place of a preamble, since the Office is silent as to motivation for why such a substitution would have been made or why such a substitution would have been obvious to one of skill in the art. Therefore, Applicants respectfully submit that the Office's proposed substitution is improper hindsight.

In addition, Applicants respectfully submit that substituting a preamble in place of the pilot of Parks would render Parks unsuitable for its intended purpose. For example, a preamble may convey data not known in advance to a receiver (instead of data known in advance to the

receiver, as with a pilot). Applicants respectfully submit that the system of Parks as proposed to be modified by the Office would be unable to perform channel estimation as intended, since a preamble that includes information not known in advance by the receiver could not be used to generate a channel estimate. Therefore, the system of Park would be unsuitable for its intended purpose of channel estimation.

Further, Applicants respectfully submit that if the Office is to maintain its position that a pilot and a preamble have the same functionality, then the Office should provide a prior art document disclosing the same. Applicants respectfully submit that the Office appears to take Office Notice of a fact not disclosed by a cited reference. However, Official Notice unsupported by documentary evidence should only be taken where the facts asserted to be well-known are capable of instant and unquestionable demonstration as being well-known. See MPEP 2144.03. Applicants respectfully submit that a pilot and a preamble having the same functionality and serving the same purpose is not a fact capable of instant and unquestionable determination. Therefore, Applicants respectfully request citation to documentary evidence describing the same.

Based on the foregoing, Applicants respectfully submit that the cited portions of Park fail to disclose or suggest demodulating a preamble, as in claim 1. Therefore, the cited portions of Park fail to disclose or suggest receiving and demodulating a preamble at a first station and determining an energy value for a transmission from the first station to a second station, where the energy value is based on the preamble, as in claim 1.

Rhoads describes methods and systems for reducing theft of wireless telephony services by using steganographically encoded authentication data. *See* Rhoads, Abstract. A logic circuit 46 accepts auxiliary data 42 and pseudo-random data 44, which are summed with digitized voice data 40 to yield an encoded output signal. *See* Rhoads, Fig. 2. The cited portions of Rhoads fail to disclose or suggest determining an energy value for a transmission from a first station to a second station, where the energy value is based on a preamble, as in claim 1. Therefore, the cited portions Rhoads fail to disclose or suggest receiving and demodulating a preamble at a first station and determining an energy value for a transmission from the first station to a second station, where the energy value is based on the preamble, as in claim 1.

LaRosa describes a wireless control subsystem that includes a programming module to extend a base communications application program interface (API) of a multitasking operating system through a set of programming objects callable by at least one wireless-related application.

See LaRosa, Abstract. A system module 32 includes exchange place object components 32a, process object components 32b, core object components 32c, cable object components 32d, socket object components 32e, and monitor object components 32f. See LaRosa, Fig. 3. The cited portions of LaRosa fail to disclose or suggest determining an energy value for a transmission from a first station to a second station, where the energy value is based on a preamble, as in claim 1. Therefore, the cited portions LaRosa fail to disclose or suggest receiving and demodulating a preamble at a first station and determining an energy value for a transmission from the first station to a second station, where the energy value is based on the preamble, as in claim 1.

Saeijs describes a method of transmitting timing critical data via an asynchronous channel without changing any datum to be transmitted. See Saeijs, Abstract. The method includes tagging each transmission unit of a data stream with timing information and using the timing information at an output end to recreate proper data timing. See Saeijs, Abstract. The cited portions of Saeijs fail to disclose or suggest determining an energy value for a transmission from a first station to a second station, where the energy value is based on a preamble, as in claim 1. Therefore, the cited portions Saeijs fail to disclose or suggest receiving and demodulating a preamble at a first station and determining an energy value for a transmission from the first station to a second station, where the energy value is based on the preamble, as in claim 1.

Therefore, the cited portions of Park, Rhoads, LaRosa, and Saeijs, individually or in combination, fail to disclose at least one element of claim 1. Hence, claim 1 is allowable.

Claim 8 is Allowable

The Office has rejected claim 8, under 35 U.S.C. § 103(a), as being unpatentable over Park in view of Rhoads, further in view of LaRosa, and further in view of Saeijs. Applicants respectfully traverse the rejection.

The cited portions of Park, Rhoads, LaRosa, and Saeijs, individually or in combination, fail to disclose or suggest means for receiving and demodulating a preamble at a first station and means for determining an energy value for a transmission from the first station to a second station, where the energy value is based on the preamble, as in claim 8. Further, the cited portions of the above cited references are silent regarding means for receiving and demodulating

a preamble at a first station and means for determining an energy value for a transmission from the first station to a second station, where the preamble includes at least one bit indicating an energy level, as in claim 8. Hence, claim 8 is allowable.

Claim 9 is Allowable

The Office has rejected claim 9, under 35 U.S.C. § 103(a), as being unpatentable over Park in view of Rhoads, further in view of LaRosa, and further in view of Saeijs. Applicants respectfully traverse the rejection.

The cited portions of Park, Rhoads, LaRosa, and Saeijs, individually or in combination, fail to disclose or suggest a computer readable medium encoded with computer-readable instructions thereon that, when executed by a computer, cause the computer to receive and demodulate a preamble at a first station and determine an energy value for a transmission from the first station to a second station, where the energy value is based on the preamble, as in claim 9. Hence, claim 9 is allowable.

Claim 10 is Allowable

The Office has rejected claims 10 and 15-16, under 35 U.S.C. § 103(a), as being unpatentable over Park in view of Rhoads, further in view of LaRosa, and further in view of Saeijs. Applicants respectfully note that claims 15-16 have been canceled without prejudice or disclaimer. Applicants respectfully traverse the remaining rejection.

The cited portions of Park, Rhoads, LaRosa, and Saeijs, individually or in combination, fail to disclose or suggest a processor operable to demodulate a preamble received at a first station and a transmission power control unit for determining an energy value for a transmission from the first station to a second station, where the energy value is based on the preamble, as in claim 10. Further, the cited portions of the above cited references are silent regarding a channel element coupled to a transmission power control unit that forms a message carrying a second preamble containing an indicator of an energy value, as in claim 10. Hence, claim 10 is allowable.

Claim 17 is Allowable

The Office has rejected claim 17, under 35 U.S.C. § 103(a), as being unpatentable over Park in view of Rhoads, further in view of LaRosa, and further in view of Saeijs. Applicants respectfully traverse the rejection.

The cited portions of Park, Rhoads, LaRosa, and Saeijs, individually or in combination, fail to disclose or suggest the specific combination of claim 17. For example, the cited portions of the above cited references fail to disclose or suggest a processor that demodulates preamble symbols received at a first station, as in claim 17. Further, the cited portions of the above cited references are silent regarding an encoder that re-encodes a received preamble to generate re-encoded preamble symbols, as in claim 17. Hence, claim 17 is allowable.

Claim 18 is Allowable

The Office has rejected claim 18, under 35 U.S.C. § 103(a), as being unpatentable over Park in view of Rhoads, further in view of LaRosa, and further in view of Saeijs. Applicants respectfully traverse the rejection.

The cited portions of Park, Rhoads, LaRosa, and Saeijs, individually or in combination, are silent regarding a processor that demodulates a preamble received at a remote station and that receives an unmodulated pilot signal, as in claim 18. Hence, claim 18 is allowable.

Claim 2 is Allowable

The Office has rejected claim 2, under 35 U.S.C. § 103(a), as being unpatentable over Park in view of Rhoads, further in view of LaRosa, further in view of Saeijs, and further in view of U.S. Patent No. 6,608,828 (“Balachandran”). Applicants respectfully traverse the rejection.

Claim 2 depends from claim 1. As explained above, the cited portions of Park, Rhoads, LaRosa, and Saeijs, individually or in combination, fail to disclose or suggest at least one element of claim 1. The cited portions of Balachandran fail to disclose or suggest the elements of claim 1 not disclosed or suggested by the cited portions of Park, Rhoads, LaRosa, and Saeijs.

Balachandran describes a header that is repeatedly transmitted and received on a radio channel with data, where at least one initially received header is decoded to identify header field values. *See* Balachandran, Abstract. Balachandran describes receiving multiple headers, decoding the headers, and comparing one or more portions of the headers to determine if

portions have been decoded correctly. *See* Balachandran, col. 4, ll. 38-52. The cited portions of Balachandran fail to disclose or suggest determining an energy value for a transmission from a first station to a second station, where the energy value is based on a preamble. Therefore, the cited portions of Balachandran fail to disclose or suggest receiving and demodulating a preamble at a first station and determining an energy value for a transmission from the first station to a second station, where the energy value is based on the preamble, as in claim 1, from which claim 2 depends. Hence, claim 2 is allowable, at least by virtue of depending from an allowable claim.

Claim 11 is Allowable

The Office has rejected claim 11, under 35 U.S.C. § 103(a), as being unpatentable over Park in view of Rhoads, further in view of LaRosa, further in view of Saeijs, and further in view of Balachandran. Applicants respectfully traverse the rejection.

The cited portions of Park, Rhoads, LaRosa, Saeijs, and Balachandran, individually or in combination, fail to disclose or suggest a processor operable to demodulate a preamble received at a first station and a transmission power control unit for determining an energy value for a transmission from the first station to a second station, where the energy value is based on the preamble, as in claim 10, from which claim 11 depends. Hence, claim 11 is allowable, at least by virtue of depending from an allowable claim.

Claims 3-4 are Allowable

The Office has rejected claims 3-4, under 35 U.S.C. § 103(a), as being unpatentable over Park in view of Rhoads, further in view of LaRosa, further in view of Saeijs, and further in view of U.S. Patent No. 6,389,034 (“Guo”). Applicants respectfully traverse the rejections.

Claims 3-4 depend from claim 1. As explained above, the cited portions of Park, Rhoads, LaRosa, and Saeijs, individually or in combination, fail to disclose or suggest at least one element of claim 1. The cited portions of Guo fail to disclose or suggest the elements of claim 1 not disclosed or suggested by the cited portions of Park, Rhoads, LaRosa, and Saeijs.

Guo describes a common packet data channel (CPDC) system structure and method to provide variable-rate packet data services in a CDMA system. *See* Guo, Abstract. A preamble may be transmitted on the CPDC and used to determine whether a timer has expired. *See* Guo, Fig. 6. If the timer has expired, then the preamble is not acknowledged and the preamble is

retransmitted after a random delay. *See* Guo, Fig. 6. The cited portions of Guo do not disclose or suggest that the preamble is used to determine an energy value. Therefore, the cited portions of Guo fail to disclose or suggest receiving and demodulating a preamble at a first station and determining an energy value for a transmission from the first station to a second station, where the energy value is based on the preamble, as in claim 1, from which claims 3-4 depend. Hence, claims 3-4 are allowable, at least by virtue of depending from an allowable claim.

Claims 12-13 are Allowable

The Office has rejected claims 12-13, at paragraph 4 of the Office Action, as being unpatentable over Park in view of Rhoads, further in view of LaRosa, further in view of Saeijs, and further in view of Guo. Applicants respectfully traverse the rejections.

The cited portions of Park, Rhoads, LaRosa, Saeijs, and Guo fail to disclose or suggest a processor that demodulates a preamble received at a first station and a transmission power control unit for determining an energy value for a transmission from the first station to a second station, where the energy value is based on the preamble, as in claim 10, from which claims 12-13 depend. Hence, claims 12-13 are allowable, at least by virtue of depending from an allowable claim.

Claim 19 is Allowable

The Office has rejected claim 19, under 35 U.S.C. § 103(a), as being unpatentable over Park, Rhoads, LaRosa, and Saeijs, and further in view of U.S. Patent No. 6,738,375 (“Okanoue”). Applicants respectfully traverse the rejection.

Claim 19 depends from claim 1. As explained above, the cited portions of Park, Rhoads, LaRosa, and Saeijs, individually or in combination, fail to disclose or suggest at least one element of claim 1. The cited portions of Okanou fail to disclose or suggest the elements of claim 1 not disclosed or suggested by the cited portions of Park, Rhoads, LaRosa, and Saeijs.

Okanoue describes a packet receiver that estimates a frequency offset and a channel impulse response when a transmitted packet is detected with an erroneous timing in a communication mode. *See* Okanou, Abstract. A training sequence is provided which may demodulate the received packet. *See* Okanou, Abstract. The cited portions of Okanou do not disclose or suggest a preamble used to determine an energy value. The cited portions of

Okanoue fail to disclose or suggest receiving and demodulating a preamble at a first station and determining an energy value for a transmission from the first station to a second station, where the energy value is based on the preamble, as in claim 1, from which claim 19 depends. Hence, claim 19 is allowable, at least by virtue of depending from an allowable claim.

Further, Applicants respectfully submit that the Office's proposed combination of Park, Rhoads, LaRosa, and Saeijs, and Okanoué would render at least one of Park and Okanoué inoperable. Park describes a dedicated pilot channel for transmitting pilot signals. *See* Park, col. 4, ll. 29-39. Okanoué describes a packet that includes a training portion (interpreted by the Office as a preamble) and a data portion. *See* Okanoué, Fig. 8. The received packet is demodulated by a receiver. *See* Okanoué, col. 2, ll. 15-27. Applicants respectfully submit that substituting the pilot signal of Park for the training portion of Okanoué would render Okanoué inoperable for its intended purpose, because demodulating the pilot signal of Park would produce unintended and unpredictable results. Conversely, transmitting the packet of Okanoué over the pilot channel of Park would render Okanoué unsuitable for its intended purpose, since the packet of Okanoué is intended to be modulated and demodulated. Hence, Applicants respectfully submit that the Office's proposed combination of Park, Rhoads, LaRosa, and Saeijs, and Okanoué is inappropriate. Hence, claim 19 is allowable for at least this additional reason.

Claim 20 is Allowable

The Office has rejected claim 20, under 35 U.S.C. § 103(a), as being unpatentable over Park, Rhoads, LaRosa, and Saeijs, and further in view of U.S. Patent No. 6,859,446 ("Gopalakrishnan"). Applicants respectfully traverse the rejection.

Claim 20 depends from claim 1. As explained above, the cited portions of Park, Rhoads, LaRosa, and Saeijs, individually or in combination, fail to disclose or suggest at least one element of claim 1. The cited portions of Gopalakrishnan fail to disclose or suggest the elements of claim 1 not disclosed or suggested by the cited portions of Park, Rhoads, LaRosa, and Saeijs.

Gopalakrishnan describes integrating voice and data services onto a same frequency channel using available transmit power information to determine data rates. *See* Gopalakrishnan, Abstract. The available transmit power information indicates an amount of transmit power available for future data transmissions over one or more data channels. *See* Gopalakrishnan, Abstract. The cited portions of Gopalakrishnan are silent regarding receiving and demodulating

a preamble at a first station and determining an energy value for a transmission from the first station to a second station, where the energy value is based on the preamble, as in claim 1, from which claims 20 depends. Hence, claim 20 is allowable for at least this reason.

New claims 21-24 are Allowable

New claims 21-24 depend from claim 17, which Applicants have shown to be allowable. Hence, claims 21-24 are also allowable, at least by virtue of depending from an allowable claim.

CONCLUSION

Applicants have pointed out specific features of the claims not disclosed, suggested, or rendered obvious by the cited portions of the references applied in the Office Action. Accordingly, Applicants respectfully request reconsideration and withdrawal of each of the objections and rejections, as well as an indication of the allowability of each of the pending claims.

Any changes to the claims in this response, which have not been specifically noted to overcome a rejection based upon the cited references, should be considered to have been made for a purpose unrelated to patentability, and no estoppel should be deemed to attach thereto.

The Examiner is invited to contact the undersigned attorney at the telephone number listed below if such a call would in any way facilitate allowance of this application.

The Commissioner is hereby authorized to charge any fees, which may be required, or credit any overpayment, to Deposit Account Number 17-0026.

Respectfully submitted,

Feb. 17, 2011
Date

S. H. Beladi
Sayed H. Beladi, Reg. No. 42,311
Attorney for Applicant
QUALCOMM Incorporated
Attn: Patent Department
5775 Morehouse Drive
San Diego, California 92121-1714
Telephone: (858) 651-4470
Facsimile: (858) 658-2502